



# **MOUNTED WARFARE SIMULATIONS TRAINING CENTER VIRTUAL TRAINING PROGRAM**



# Outline

- **VTP STRATEGY and BACKGROUND**
- **MISSION and ORGANIZATION**
- **VTP COMPONENTS and CAPABILITIES**
- **SCHEDULING**
- **SIMNET/CCTT COMPARISON**
- **VTP IMPACT ANALYSIS**
- **MOUT INTEGRATION**

**Virtual Training Program Observer/ Controller**



# **VTP STRATEGY and BACKGROUND**



# Strategy

## VTP supports the Mounted Training Strategy to Develop Army's Core Competencies

- ✓ Combat Ready Soldiers
- ✓ Tactically Proficient and Confident Leaders
- ✓ Killer Platoons and Companies
- ✓ High Performing Brigade and Battalion Staffs
- Instill small-unit tactical and battle staff excellence
- Provide cost-efficient simulation-based training using virtual and constructive environments supported by dedicated Observer Controller Team
- Focus on critical battle task execution using highly structured tactical exercises that are rigorous, task-based, progressively difficult, and permit the repeated practice of critical



# Background

- **1993 National Defense Authorization Act funded to establish Reserve Component VTP**
- **Established to develop, formatively evaluate, and implement structured, simulation-based unit training**
  - **Conceptualized as a “Turn-Key” program to address readiness concerns with time-compressed training, incorporation of simulation technologies, and execution of critical maneuver and command & control tasks**
  - **Active Component units included in 1994**
  - **Written as a requirement in** Virtual Training Program Observer/ Controller

# **MISSION and ORGANIZATION**



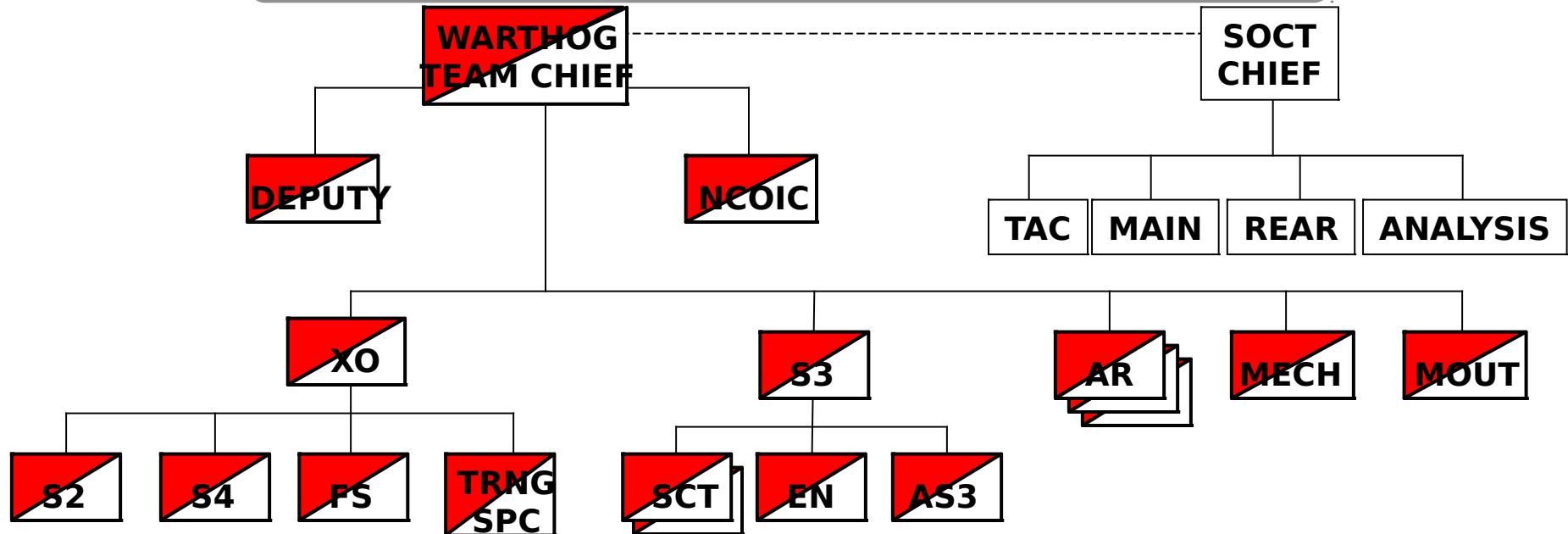


# Mission

**The Observer/Controller (OC) Team trains selected ground combat units in virtual (SIMNET/CCTT), constructive (JANUS and BBS), and live (MUCTS) environments to increase tactical proficiency at platoon through brigade level; supports Armor School Program of Instruction collective training exercises.**



# OC Team Organization



- 30 Military (Observer Controllers)
- 22 GS Civilian (Exercise Controllers)
- 14 MPRI Contract Civilians

CHIEF AND STAFF COVER ALL BOS AT BN / TF LEVEL

QUALIFIED OC / EXERCISE CONTROLLER TEAMS COVER AR, MECH, CAV PLT / CO  
SOCT COVERS ALL BOS AT BN AND BDE / TF LEVEL



# Senior OC Team (SOCT)

**SR BDE TNR-1**

**TAC CP - 2**

**MAIN CP - 6**

**REAR CP- 3**

**Analysis-2**

**CMD GRP-OC  
CP-OC**

**CP-OC  
OPS-OC  
INTEL-OC  
AD-OC  
FS-OC  
EN-OC**

**REAR-OC  
LOG-OC  
PERS-OC**

**OPS  
TECH  
ANALYST**



# **VIRTUAL TRAINING PROGRAM COMPONENTS and CAPABILITIES**

# **Mounted Warfare Training Center (MWTC)**



- **Virtual Training Program is part of a larger Fort Knox capability**
- **The MWTC includes the VTP, Conduct of Fire Trainer, Driver Trainer, Platoon Gunnery Trainer, Ranges, Maneuver Areas and Facilities which leverage existing capabilities required for Armor School operations and make them available for AC/RC unit training**



# VTP Components

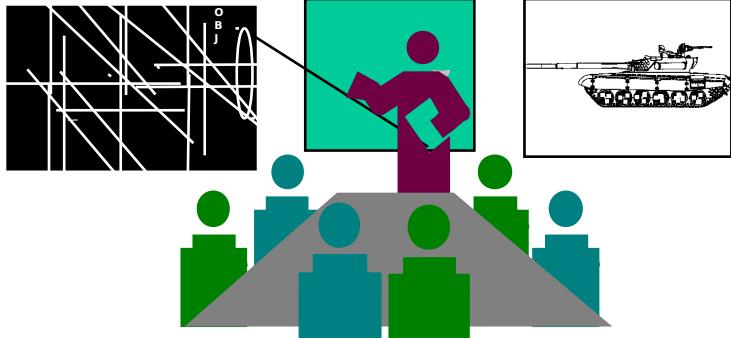
(1 of 2)

- **Trained, professional Observer & Exercise Controllers**
- **Exportable team (SOCT) for battalion and brigade constructive exercises**
- **Simulators (SIMNET & CCTT), Work Stations, JANUS and BBS Suites**
- **“Turn-Key” operation: 123 structured tactical tables**



# VTP Components

(2 of 2)



**AARs with computer based video and audio collection and playback**

**TAKE HOME PACKAGE**

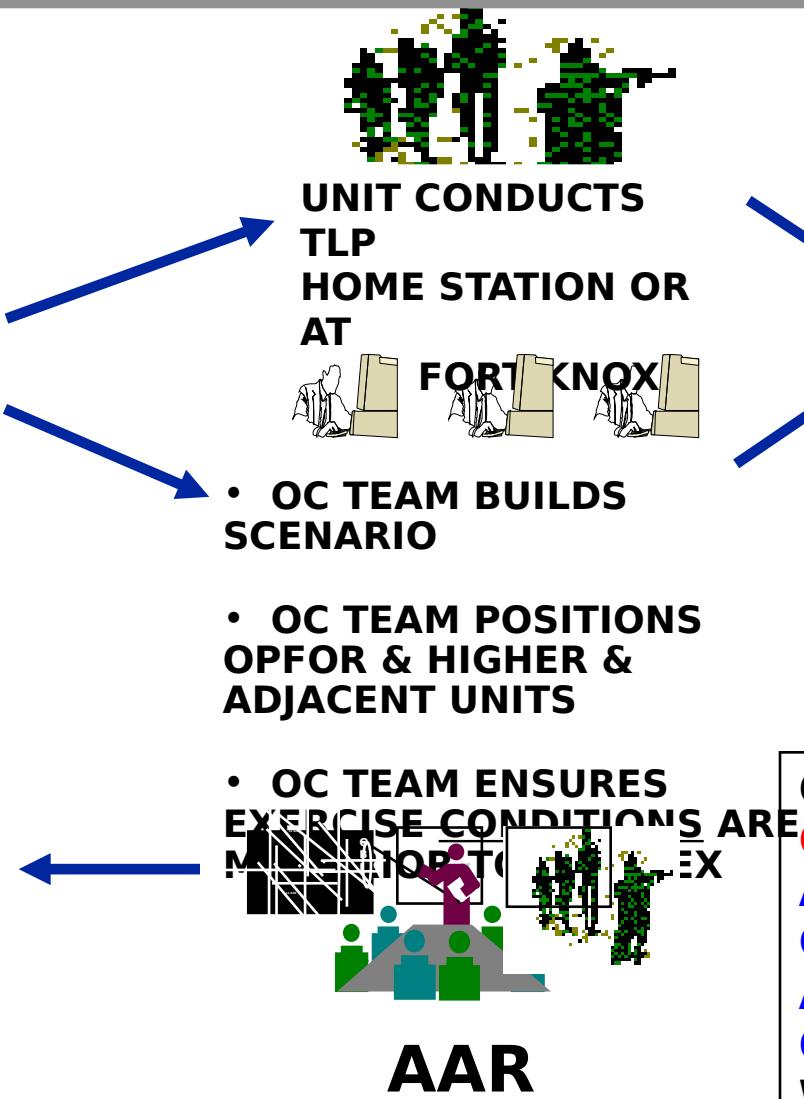
*OC tactical competency & maneuver background is critical to VTP credibility*

**Take Home Packages with results and recommendations to help guide future training**



# Virtual Training Methodology

**Unit Selects Mission/Structure and Exercises**  
Armor, Mech, Cav PLT thru BDE  
Repetitive Execution Focus



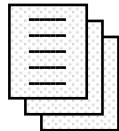
- UNIT MANS SIMULATORS, CP AND CTCP
  - UNIT EXECUTES PLAN IN SIMNET/CCTT/JANUS/BBS
  - TRAINS TO STANDARD

OC TEAM CONTROLS:  
**OPFOR**  
**ADJACENT UNITS**  
**CS AND CSS**  
**AVIATION**  
**OBSTACLES**  
**WITH AUTOMATED FORCES**



# Training Support Package

## OPORDS



**BRIGADE**

**BATTALION**

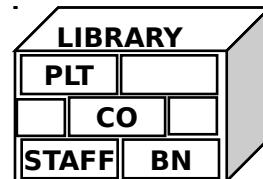
**COMPANY**

**PLATOON**

- BASELINE FOR TASKS TO BE TRAINED**

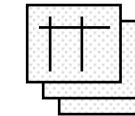
- PLANNING AND REHEARSALS**

## TACTICAL TABLES



- SIMPLE TO COMPLEX**
- CRAWL - WALK - RUN**
- SERIES OF “GATES” AT EACH LEVEL**
- VARY CONDITIONS w/ DEGREE OF DIFFICULTY**
- USES MTP TASKS, CONDITIONS, AND STANDARDS**

## O/C INSTRUCTIONS



- CONTROLS ORDERS AND EVENTS**
- MAINTAINS CONDITIONS FOR EACH TABLE**
- FACILITATES AARs ON CRITICAL EVENTS DURING UNIT EXECUTION**
- ENSURES TASKS AND STANDARDS ARE ACHIEVED**



# METL

## Battalion/Task Force

**Command and Control**

**Perform Intelligence Operations**

**Employ Fire Support**

**Move Tactically**

**Perform CSS Operations**

**Fight a Meeting Engagement** **Company/Team**

**Defend**

**Assault**

**Attack By Fire**

**Consolidate**

**Reorganize**

**Perform Tactical Roadmarch**

**Perform Actions on Contact**

**Support by Fire**

**Attack by Fire**

**Perform Tactical Movement**

**Assault an Enemy Positions**

**Conduct Fire and Movement**

**Defend a Battle Position**

**Conduct Consolidation/Reorganization**

**Take Active Air Defense Measures**



# Virtual Training Program Capabilities

- **12 platoons (SIMNET) / 3 platoons (CCTT)**  
**OR**
- **4 companies (SIMNET) / 1 company (CCTT)**  
**OR**
- **1 Battalion/Task Force (Virtual)**  
**AND**
- **1 Brigade or Battalion/Task Force  
(Constructive)**



**SCHEDULING**



# Active Component Schedule

- **MONDAY** Deploy
- **TUESDAY** Fam Course / Platoon Tables
- **WEDNESDAY** Company Tables
- **THURSDAY** Battalion Exercise
- **FRIDAY** Battalion Exercise / Redeploy



# IDT Weekend Schedule

## FRIDAY

**1800 Arrive**  
**1900 Inbrief**  
**Training**  
**1930 Familiarization Course**  
**depart**  
**2200 Return to billets**

## SUNDAY

**0600 Breakfast**  
**0800**  
**1330 Lunch,**

## SATURDAY

**0600 Breakfast**  
**0800 Training**  
**1200-1300 Lunch (Brown bag / MRE)**  
**1300-1700 Training**  
**1700-1800 Dinner**  
**1800 Training**  
**2200 Return to billets - Transportation Dependent**



# Annual Training Schedule

<b><u>DAY</u></b>	<b><u>EVENT</u></b>	<b><u>DAY</u></b>	<b><u>EVENT</u></b>
<b>1</b>	<b>Deploy</b>	<b>8</b>	<b>JANUS (X2)</b>
<b>2</b>	<b>Inbrief /</b>	<b>9/10</b>	<b>Co Tables</b>
	<b>Fam Course</b>	<b>11</b>	<b>SIMNET Prep</b>
<b>3/4</b>	<b>Plt Tables</b>	<b>12</b>	<b>Co / Bn SIMNET</b>
<b>5</b>	<b>JANUS Prep /</b>	<b>13</b>	<b>Co / Bn SIMNET</b>
	<b>Plt/Co SIMNET</b>	<b>14/15</b>	<b>Redeploy</b>
<b>6</b>	<b>JANUS (X2)</b>		
<b>7</b>	<b>JANUS Prep /</b>		
	<b>Plt/Co SIMNET</b>		



# Milestones

## (1 of 2)

- **Unit schedules SIMNET and / or JANUS/ BBS & O/C Team with G3 at Annual Scheduling Conference**
- **Priority: Armor School POI, RC, AC**
- **Pre-rotation letter - Unit visit by O/C Team**
- **Commander's METL assessment**  
Virtual Training Program Observer/ Controller



# Milestones

(2 of 2)

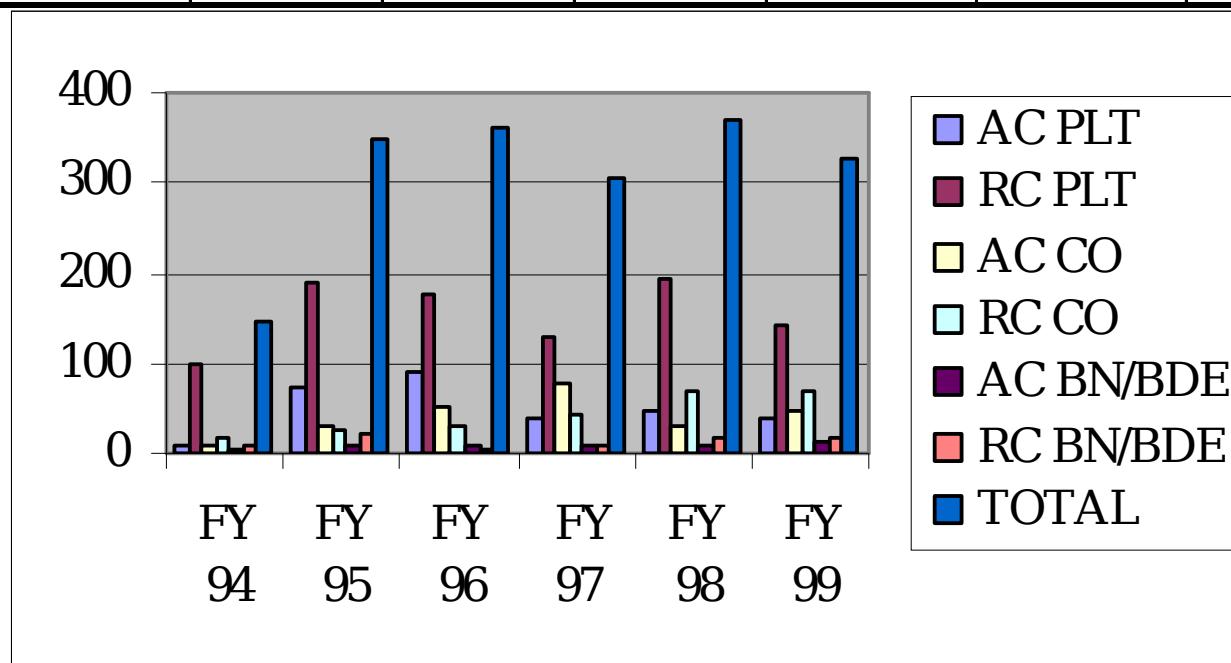
- **On going coordination:**
  - **Training objectives & unit level for training**
  - **O/C Team presents draft training plan to unit**
- **Unit reviews/approves plan; familiarizes with OPORD(s); prepares maps & overlays**
- **Crews view simulator familiarization tape(s) & study SIMNET crew/operator**

# Training Load

## FY94 - FY99

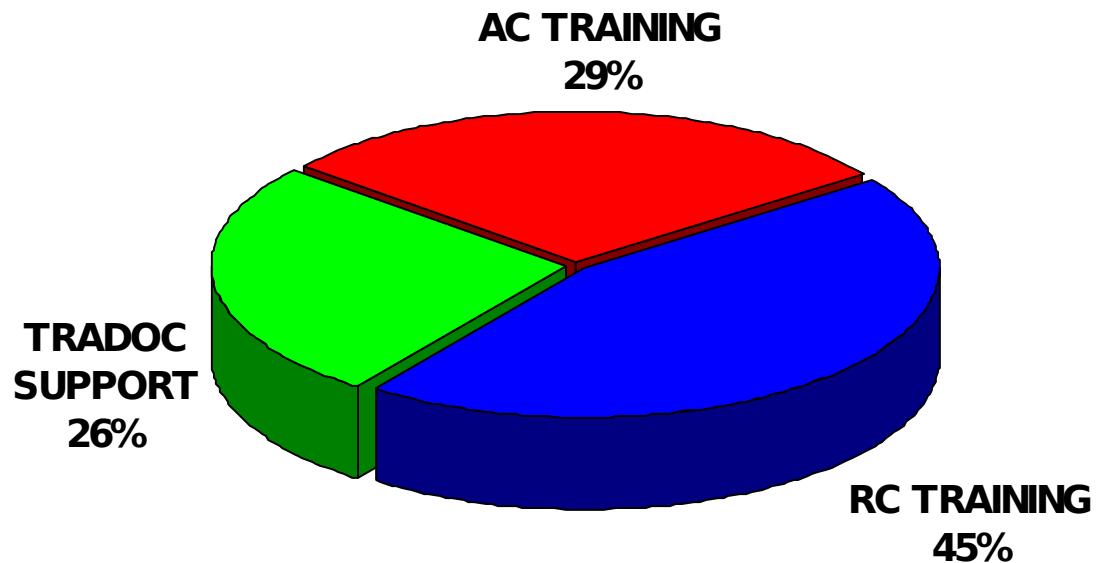


	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
AC PLT	7	74	90	39	49	37
RC PLT	100	191	178	129	193	143
AC CO	9	28	50	77	32	47
RC CO	16	27	31	44	67	70
AC BN/BDE	6	7	8	8	14	12
RC BN/BDE	8	21	4	7	19	17
<b>TOTAL</b>	<b>146</b>	<b>348</b>	<b>361</b>	<b>304</b>	<b>374</b>	<b>326</b>





# Distribution Of Training Load

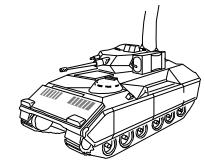
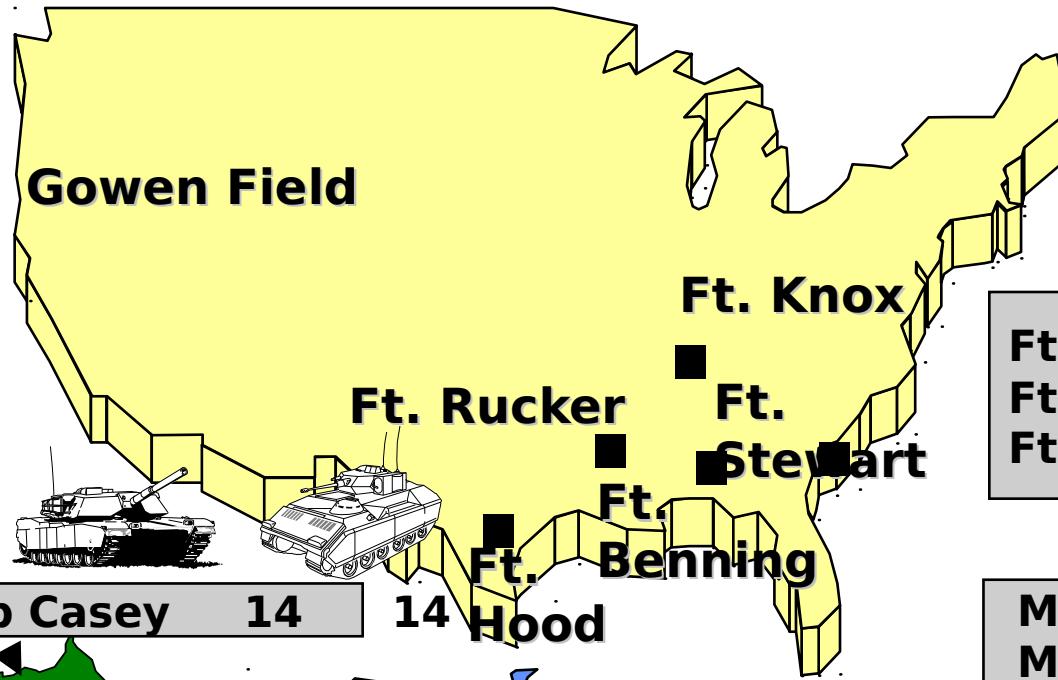




**SIMNET**  
**CLOSE COMBAT TACTICAL TRAINER**  
**COMPARISONS**

The logo consists of a circular arrangement of interlocking gears. The top half of the circle contains the word "TRAINING" and the bottom half contains the word "WARTHOGS". In the center of the circle, the word "SIMNET" is written in large red capital letters, and below it, "CLOSE COMBAT TACTICAL TRAINER" and "COMPARISONS" are also written in red capital letters.

# SIMNET Facilities



**FIXED**

Ft Knox	48	14
Ft Stewart	14	14
Ft Rucker		02 02

**MOBILE**

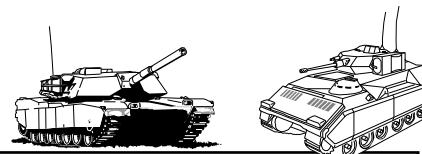
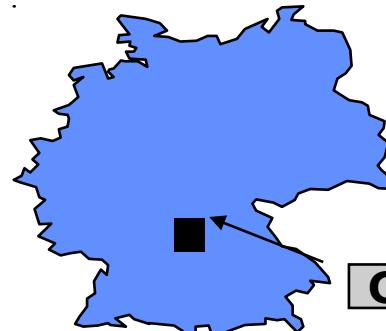
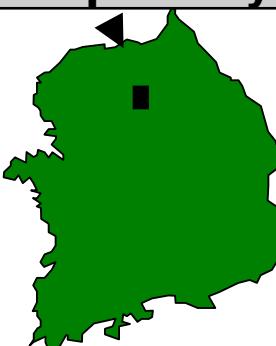
Macon GA	0	04
McCain MS	04	0
Gowen Field		04

Camp Casey

14

14

Hood



Grafenwoehr 42

27

# **SIMNET Databases**

- **FORT IRWIN - NATIONAL TRAINING CENTER**
- **HOHENFELS - COMBAT MANEUVER TRAINING CENTER (AND CONTIGUOUS AREA)**
- **FORT KNOX - ADJACENT FARMLAND WEST OF POST**
- **KOREA - CHORWON BASIN**
- **BOSNIA - PLOCE (COAST) TO SARAJEVO (STEALTH ONLY DUE TO MEMORY DEMANDS)**

# **SIMNET Characteristics**

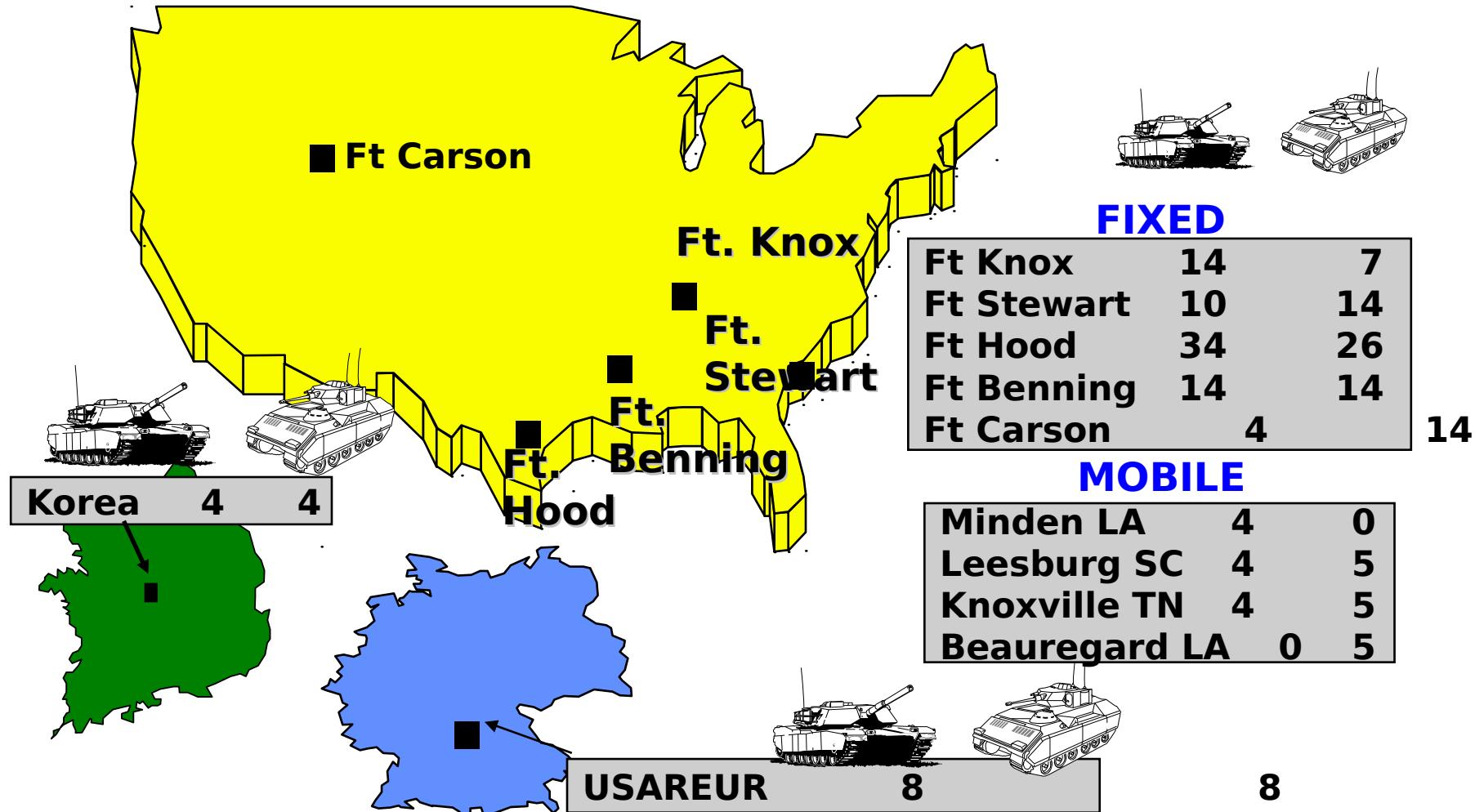
## **STRENGTHS**

- MANEUVER TASKS
- FIRE CONTROL AND DISTRIBUTION
- CALL FOR ARTILLERY / MORTAR FIRES
- BATTLE COMMAND / STAFF SKILLS
- TEAM WORK
- LIMITED CREW TRAINING
- ⇒ **SYNCHRONIZATION**

## **WEAKNESSES**

- DAY ONLY
- NO THERMAL SIGHT CAPABILITY
- NO WEATHER FUNCTIONS
- NO SMOKE
- LIMITED ENGINEER PLAY
- VIEW OF ONLY 3.5 KM
- MAIN GUN IS ONLY WEAPON

# CCTT Facilities



Planned Distribution End of FY '00

Virtual Training Program Observer/ Controller

# CCTT Characteristics

## STRENGTHS

- REALISTIC TERRAIN AND VEHICLE DEPICTION
- IMPROVED CREW COMPARTMENT FIDELITY
- WEATHER FUNCTIONS, SMOKE, DAY / NIGHT OPERATIONS -THERMAL SIGHT CAPABILITY
- “OUT OF HATCH” VIEW
- REALISTIC COMBAT ENGINEER FUNCTIONS
- MACHINE GUNS INCORPORATED

## WEAKNESSES

- CREWS MUST BE WEAPONS SYSTEM QUALIFIED
- LIMITED CCTT'S AVAILABLE:  
1 TK CO / 2 M2A3 PLTS
- LIMITED NUMBER OF AAR SIGHTS (5)
- MANHOUR INTENSIVE



# **VTP IMPACT ANALYSIS**



# VTP Impact Analysis Concep

- **Analysis of platoon and company level training to determine trends in unit and OC performance**
- **Measure pre-mission (baseline proficiency) and post-mission (training) performance**
- **Collection Periods: Nov 98 - March 99 and April - June 99**
- **Platoons / Companies: 30 / 16**



# VTP Impact Analysis Results

- **Unit survivability and lethality increase**
- **Fratricide still happens but has decreased**
- **Reporting time increased, BUT... better Actions on Contact and more accurate reports**



**OC TEAM**  
**INTEGRATION INTO**  
**MOUT SITE TRAINING**



# MOUT Integration

- Fort Knox collective effort: G-3, DTDD, Range Control, and Warthog MOUT OC Team (7 soldiers)
- Teach, coach, mentor combined arms heavy company team in mounted urban warfare
  - Certified O/Cs (JRTC, MOUT Instructors Course)
  - Established SME Resource Library / Links to Joint sources
  - Constructed EXROE
- Assist Range Control with MUCTS Range SOP and Safety Brief
- Developing virtual/constructive simulations
- USAARMC MUCTS fully operational in May 2000; demonstrate capabilities as part of Armor Conference



# **VIRTUAL TRAINING PROGRAM CONCLUSION**



## Commander's Comments

**" VTP at Fort Knox is the only place I am aware that I can elevate my training from crew to company and task force operations. Since beginning my command more than 2 years ago, the brigade has gained 358 soldiers and attrition has dropped to 10-12%. I credit the VTP at Fort Knox as the number one reason for this improvement! We could not achieve these successes at home station armories."**

**COL Paul Duttge  
Commander, 3d BDE, 42d ID,**

**NYARNG**

**STOW<sup>in Progress</sup> Rotation 1998 Observer/ Controller**



## Commander's Comments

**" The BCT was able to derive many training benefits normally associated only with live exercises, but at a fraction of the cost..."**

**" The only way to improve on the level of training which the BCT received at Fort Knox is to deploy the BCT to the field for force on force operations in a maneuver area the size of the National Training Center for two weeks."**

**Colonel (P) Joe Peterson  
Commander, 3BCT  
AAR 10 DEC 97**



# Virtual Training Program

- A quality, structured training program that results in increased tactical proficiency at the collective training level:

- Turn-key operation / minimal training distractors
- Ability to quickly re-cock / repeat tasks to meet unit training objectives and Army standards: task



# **MOUNTED WARFARE SIMULATIONS TRAINING CENTER VIRTUAL TRAINING PROGRAM**